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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 April 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *4/15/2004*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

Examiner's Note

1.   For examination purpose, claim 33 is treated as an independent claim because it

incorporates all limitations of the preceding claim 1.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

> Determining whether the claim falls within one of the four enumerated categories of patentable subject matter recited in 35 U.S.C. 101 (i.e., process, machine, manufacture, or composition of matter) does not end the analysis because claims directed to nothing more than abstract ideas (such as mathematical algorithms), natural phenomena, and laws of nature are not eligible for patent protection. Diehr, 450 U.S. at 185, 209 USPQ at 7; accord, e.g., Chakrabarty, 447 U.S. at 309, 206 USPQ at 197; Parker v. Flook, 437 U.S. 584, 589, 198 USPQ 193, 197 (1978); Benson, 409 U.S. at 67-68 , 175 USPQ at 675; Funk, 333 U.S. at 130, 76 USPQ at 281. "A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right." Le Roy, 55 U.S. (14 How.) at 175. Instead, such "manifestations of laws of nature" are "part of the storehouse of knowledge," "free to all men and reserved exclusively to none." Funk, 333 U.S. at 130, 76 USPQ at 281.

> Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

> When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

> In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

3.   Claims 1-32 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter. Claims 1-32 are method claims that do not qualify as a statutory

process because they cite purely mental steps, that could be performed in the human mind and

that the presence of another statutory category, such as an apparatus, is not required to perform

the method/process. Based on Supreme Court precedent and recent Federal Circuit decisions in

re Bilski, Appeal No. 2007-1130, a statutory process must (1) be tired to another statutory class

(such as a particular apparatus) or (2) transform underlying subject matter (such as an article or

materials) to a different state or thing. If neither of these requirements is met by the claim, the

method is not a patent eligible process under 35 U.S.C. 101 and should be rejected as being

directed to non-statutory subject matter. Thus, to qualify as a 35 U.S.C. 101 statutory process,

the claim should positively recite the other statutory class (the thing of product) to which is tied,

for example, by identifying the apparatus that accomplishes the method steps, or positively recite

the subject matter that is being transformed, for example by identifying the material that is being

changed to a different state. Also see MPEP 2106.02. Although claims 27-36 and 44-49 recites

"a computer implemented method", there is nothing in the claims which explicitly indicates what

apparatus accomplishes the method steps, or positively recite the subject matter that is being

transformed, for example by identifying the material that is being changed to a different state.

4.   Claims 33-36 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter as follows. Claims 33-36 define a "system". However, while the

preamble defines a "system", which would typically be indicative of an "apparatus", the body of

the claim lacks definite structure indicative of a physical apparatus. Therefore, the claim as a

whole appears to be nothing more than a "system" of software elements, thus defining functional

descriptive material per se.

Functional descriptive material may be statutory if it resides on a "computer-readable

medium or computer-readable memory". The claim(s) indicated above lack structure, and do not

define a computer readable medium and are thus non-statutory for that reason (i.e., "When

functional descriptive material is recorded on some computer-readable medium it becomes

structurally and functionally interrelated to the medium and will be statutory in most cases since

use of technology permits the function of the descriptive material to be realized" – Guidelines

Annex IV). The scope of the presently claimed invention encompasses products that are not

necessarily computer readable, and thus NOT able to impart any functionality of the recited

program. The examiner suggests:

Adding structure to the body of the claim that would clearly define a statutory apparatus.

Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

6.   Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing

to particularly point out and distinctly claim the subject matter which applicant regards as the

invention. The term "regular need" in claim 3 is a relative term which renders the claim

indefinite. The term "regular need" is not defined by the claim, the specification does not

provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would

not be reasonably apprised of the scope of the invention. For the sake of examination, examiner

interprets this term as "need".

7.   Claim 7-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention. The term "standard data" and "non-standard data" recited in claim 7-12 do not

have clear definition either in the specification or claim; and it is not clear regarding the scope of

these terms. For the sake of interpretation, examiner interprets the terms as "provided" and "not

provided", in light of specification PGPub paragraph [0035].

Claim Rejections - 35 USC § 102

8.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

9.   Claims 1-2, 5-10, 13, 16-18, 22-26 and 28-36 are rejected under 35 U.S.C. 102(e) as

being anticipated by Valdivia et al (US patent 6904265).

        As to claim 1, Valdivia et al discloses a process for managing capacity resources in a

shared computing environment comprising the steps of:

        producing and maintaining a capacity plan (col. 1, line 60 - col. 2, line 5, "generating a

capacity plan...selectively allocate bandwidth to the terminal in response to the bandwidth

request messages. Under this approach, the capacity requirements of multiple service providers

can be efficiently managed");

        handling capacity requests from a requester (col. 1, line 60 - col. 2, line 5, "The remote

processor is configured to process bandwidth request messages from the terminal; figure 5,

"Capacity Request"); performing analysis review on capacity requests to identify capacity issues

(figure 5, "Capacity Analysis Request", "Analysis Response"); and

executing a problem manager program in a data-processing system to resolve any

identified capacity issues so that a service provider can meet all service obligations (col. 1, line

60 - col. 2, line 5, "generating a capacity plan...selectively allocate bandwidth to the terminal in

response to the bandwidth request messages. Under this approach, the capacity requirements of

multiple service providers can be efficiently managed"; col. 13, lines 17-30, "allocating uplink

resources based on congestion parameters and discarding packets when congestion occurs or is

imminent...contend for resources in an orderly fashion as prescribed by the service capabilities,

which the ST is provisioned and to respond to congestion information sent from the payload").

As to claim 2, Valdivia discloses the process of claim 1 wherein producing and

maintaining the capacity plan comprises the steps of:

gathering capacity data (figure 4, "Traffic Measurements and Statistics"; "Traffic

Messurements and Connection Requests");

analyzing the capacity data by extracting capacity obligations from a database (col. 17,

lines 58-67, "capacity resource configuration database") and comparing the capacity obligations

with existing resources to identify capacity obligations that can be met with existing resources

(col. 22, lines 57-67, "(1) the required services can be provided based on current system

configuration of capacity resources"), and to identify capacity obligations that require additional

resources (col. 22, lines 57-67, "(2) the required services can be provided, but would require

reconfiguration of system capacity resources");

generating the capacity plan for using the identified existing resources and the identified

additional resources to meet capacity obligations (col. 23, lines 5-18; figure 5, "Capacity

Resource Configuration");

gaining approval for the capacity plan from one or more persons with the authority to

commit to the implementation of the capacity plan (figure 5, "negotiation"; col. 23, lines 5-18,

"negotiation between the wholesaler and NSP...authorizes"); and

notifying any parties to the capacity plan of the plan details (col. 23, lines 5-18, "the

wholesaler instructs the NOC 107 to reconfigure capacity resources").

As to claim 5, Valdivia discloses the process of claim 2 further comprising the steps of:

before gaining approval for the capacity plan, designing a configuration to support the

capacity plan (figure 5, "Analysis Response"; col. 22, line53- col. 23, line15, before negotiating

with wholesaler, it is determined 1) the requested services can be provided based on current

system configuration of capacity resources. The current configuration is a configuration

designed to support the capacity plan); and

testing the designed configuration to determine if the configuration is capable of

balancing a workload as required to meet existing and anticipated capacity obligations (col. 22,

line53- col. 23, line15, before negotiating with wholesaler, it is tested whether 1) the requested

services can be provided based on current system configuration of capacity resources).

As to claim 6, Valdivia discloses the process of claim 2 further comprising the step of,

before gaining approval for the capacity plan, analyzing the performance impact of the capacity

plan by determining the impact to the components of the capacity plan during the plan period

(col. 22, lines 53-67).

As to claim 7, Valdivia discloses the process of claim 1 wherein handling a capacity

request comprises the steps of:

analyzing the capacity request with a problem management program (figure 5, "NOC" is

the problem management program that analyzes the capacity request);

extracting the requester's entitlements and standard data from a database (see 112

rejection above and the examiner's interpretation; col. 23, lines 5-20, "Wholesaler...NPC

databases");

determining if the requester is entitled to have the capacity request satisfied (col. 23, lines

5-16, "based on the negotiation and contract agreement between the Wholesaler and NSP";

responsive to determining that the requester is entitled to have the capacity request

satisfied, determining if any non-standard data is required to satisfy the capacity request (see 112

rejection above and examiner's interpretation; col. 23, lines 20-26, "based on the system capacity

resource allocations, the wholesaler can overbook capacity allocated to NSPs");

responsive to determining that non-standard data is required to satisfy the capacity

request, submitting a request for the non-standard data to a collection team, receiving the non-

standard data from the collection team, and reviewing the non-standard data received from the

collection team; analyzing the capacity plan against actual usage data (col. 18, lines 8-28,

"location data is not provided by the ST's NSP as part of the NSP provisioning

parameters...checks, over time, whether the scheduled connection parameters fall within NSP

capacity provisions"); and

updating the capacity plan to reflect the result of the capacity request (col. 18, lines 30-

32, "The NSP selectively supplies the NOC 107 with various service parameters; lines 50-55,

"NOC to monitor such changes and to ensure that all ST service provisions are within the scope
of the NSP's capacity provisions").

As to claim 8, Valdivia et al discloses the process of claim 7 wherein analyzing the
capacity plan against actual usage data comprises the steps of: obtaining plan data from the
database; obtaining actual usage data from the database; comparing the plan data with actual
usage data; determining from the comparison if the actual usage data deviates from the plan data;
and responsive to determining that the actual usage data deviates from the plan data,
investigating the deviations (col. 17, lines 57-67, "capacity management database, capacity
resource configuration database, NSP capacity allocations database, ST service allocation
database"; col. 18, lines 30-33, "the SNP selectively supplies the NOC with various service
parameters"; lines 50-55, "NOC to monitor such changes and to ensure that all NST service
provision are within the scope of the NSP's capacity provisions"; col. 20, lines 47-55, "identifies
capacity configuration changes that may be performed during the course of a typical day to meet
capacity requirements over the region as well as constraints that may be considered when
planning these changes").

As to claim 9, Valdivia et al discloses the process of claim 8 wherein investigating the
deviations comprises the steps of: determining if the deviation is the result of an anomaly; and
responsive to determining that the deviation is a result of an anomaly, documenting the deviation
(col. 20, lines 47-56, "to meet requirements over the region as well as the constraints…capacity
planning database contains the plans for all scheduled capacity configuration". It is to be noted
that the difference between the old plan and the new plan indicates the deviation. "to meet
constraints" indicates an anomaly with the old plan).

As to claim 10, Valdivia et al discloses the process of claim 8 wherein investigating the deviations comprises the steps of: determining if the deviation is the result of a business cycle; responsive to determining that the deviation is the result of a business cycle, documenting the deviation (col. 20, lines 47-56, "during the course of a typical day...a capacity planning database contains the plans for all scheduled capacity configuration". It is to be noted that the difference between the old plan and the new plan indicates the deviation).

As to claim 13, Valdivia et al discloses the process of claim 1 wherein handling a capacity request comprises the steps of: analyzing the capacity request with a problem management program; extracting the requester's entitlements and standard data from a database; determining if the requester is entitled to have the capacity request satisfied; responsive to determining that the requester is entitled to have the capacity request satisfied, determining if any non-standard data is required to satisfy the capacity request; responsive to determining that non-standard data is required to satisfy the capacity request, submitting a request for the non-standard data to a collection team, receiving the non-standard data from the collection team, and reviewing the non-standard data received from the collection team (see similar rejection to claim 7); managing capacity data for reporting; determining if new or changed reports are required; responsive to determining that new or changed reports are required, running reports (col. 20, lines 48-55, each saved capacity plan is equivalent to a report); and updating the capacity plan to reflect the result of the capacity request (see similar rejection to claim 7).

As to claim 16, Valdivia discloses the process of claim 1 wherein handling a capacity request comprises the steps of: analyzing the capacity request with a problem management program; extracting the requester's entitlements and standard data from a database; determining

if the requester is entitled to have the capacity request satisfied; responsive to determining that

the requester is entitled to have the capacity request satisfied, determining if any non-standard

data is required to satisfy the capacity request; responsive to determining that non-standard data

is required to satisfy the capacity request, submitting a request for the non-standard data to a

collection team, receiving the non-standard data from the collection team, and reviewing the

non-standard data received from the collection team (see similar rejection to claim 7); analyzing

trends (col. 19, lines 54-56, "traffic trend analysis"); and updating the capacity plan to reflect the

result of the capacity request (see similar rejection to claim 7)..

As to claim 17, Valdivia et al discloses the process of claim 16 wherein analyzing trends

comprises the steps of: identifying relevant trends (col. 6, lines 45, "trend information");

obtaining historical capacity data from the database (col. 17, past paragraph, "allocation

database"); determining if a specific analysis is required; responsive to determining that a

specific analysis is required, determining if additional capacity data is available (col. 19, lines

50-61; figure 5; col. 22, line 53 – col. 23, line 5), responsive to determining that additional

capacity data is not available, requesting the additional capacity data from a collection team;

obtaining the additional capacity data (col. 23, lines 1-22); selecting resource types and workload

types to identify trends (col. 9, lines 5-40, "based on...traffic trends"); responsive to identifying

trends, documenting the trends in the database (col. 9, lines 50-55, "measures and records the

amont of broadcast capacity..."); determining if any identified trends deviate from the capacity

plan (col. 9, paragraph 2); and responsive to determining that one or more identified trends

deviates from the capacity plan, investigating the deviations (col. 9, paragraph 2, "determine

which cells have excess capacity").

As to claim 18, Valdivia et al discloses the process of claim 17 wherein investigating the deviations comprises the steps of: determining if the deviation is the result of an anomaly; and responsive to determining that the deviation is a result of an anomaly, documenting the deviation (see similar rejection to claim 9).

As to claim 22, Valdivia et al discloses the process of claim 1 wherein handling a capacity request comprises the steps of: analyzing the capacity request with a problem management program; extracting the requester's entitlements and standard data from a database; determining if the requester is entitled to have the capacity request satisfied; responsive to determining that the requester is entitled to have the capacity request satisfied, determining if any non-standard data is required to satisfy the capacity request; responsive to determining that non-standard data is required to satisfy the capacity request, submitting a request for the non-standard data to a collection team, receiving the non-standard data from the collection team, and reviewing the non-standard data received from the collection team (see similar rejection to claim 7);

analyzing commitments and thresholds (col. 17, lines 24-35, "restrict the ST to a certain transmission rate" is a threshold); determining if threshold changes are required; responsive to determining that threshold changes are required, using a problem manager program to determine the new threshold value; and updating the capacity plan to reflect the result of the capacity request (col. 17, lines 24-39).

As to claim 23, Valdivia et al discloses the process of claim 22 wherein analyzing commitments and thresholds comprises the steps of: obtaining operational trend data from the database (col. 19, lines 54-56); obtaining capacity and performance objectives from the database

(col. 19, lines 50-61, "to be provided"); obtaining service level attainment and customer

satisfaction data from the database (col. 19, lines 50-61, "NSP allocations of services);

determining if any service commitments have been missed; responsive to determining that one or

more service commitments have been missed, determining resource usage at the time of the

missed service commitment (col. 9, lines 12-17); reviewing thresholds against current service

commitments; determining if threshold changes are required; responsive to determining if

threshold changes are required, documenting the required threshold changes (col. 17, lines 24-

37); determining if capacity plan changes are required; and responsive to determining that

capacity plan changes are required, updating the capacity plan to reflect the required changes

(col. 20, lines 48-57).

As to claim 24, Valdivia et al discloses the process of claim 1 wherein handling a

capacity request comprises the steps of: analyzing the capacity request with a problem

management program; extracting the requester's entitlements and standard data from a database;

determining if the requester is entitled to have the capacity request satisfied; responsive to

determining that the requester is entitled to have the capacity request satisfied, determining if any

non-standard data is required to satisfy the request; responsive to determining that non-standard

data is required to satisfy the capacity request, submitting a request for the non-standard data to a

collection team, receiving the non-standard data from the collection team, and reviewing the

non-standard data received from the collection team (see similar rejection to claim 7);

forecasting resource requirements (col. 20, line 46, "expected future demand"); and updating the

capacity plan to reflect the result of the capacity request (see similar rejection to claim 7).

As to claim 25, Valdivia et al discloses the process of claim 24 wherein forecasting resource requirements comprises the steps of: gathering resource and workload requirements; obtaining load requirements from the database (col. 2, lines 33-37; col. 17, lines 58-67); obtaining historical trends from the database (col. 6, lines 43-46); characterizing and sizing workload requirements; determining and applying a projection methodology; forecasting and sizing periods for the workload requirements; translating the workload requirements to technical resource needs; and updating the capacity plan to reflect the technical resource needs (col. 19, lines 51-61, "traffic trend" indicates workload, and the "demand for services" is equivalent to technical resource needs; col. 20, lines 48-55 discloses updating capacity plans).

As to claim 26, Valdivia et al discloses the process of claim 25 wherein characterizing and sizing workload requirements comprises the steps of: identifying a unit of workload (col. 9, lines 1-17, "traffic patterns…subband"); determining a period of interest (col. 20, lines 48-54, "a typical day"); determining a magnitude of usage (col. 20, lines 34-35); determining a duration of usage (col. 20, lines 54-59); extracting resource usage data from the database for the period of interest (col. 9, lines 52-56, "measures and records the amount of broadcast capacity that is used by connection-oriented and connectionless service"; lines 35-40, "based on some conditions such as traffic demands"); determining the resource used per unit of workload (col. 9, line 20, "there are 32 demodulators per subband"); correlating the unit of workload with the resource usage data (col. 9, lines 35-40, "based on some conditions such as traffic demands"); applying assumptions (col. 9, lines 35-42, "based on…traffic demands"; col. 6, lines 43-46, "trend information" implies assuming the history information indicates future trends); applying and normalizing

factors (col. 9, lines 23-26, "three equally spaced 16 Mbps…"); and validating results with peer reviews (col. 18, lines 8-20, "validate further ST provisioning parameters").

As to claim 28, Valdivia et al discloses the process of claim 1 wherein handling a capacity request comprises the steps of: analyzing the capacity request with a problem management program (figure 5, "capacity analysis request" and "capacity analysis response"); extracting the requester's entitlements and standard data from a database; determining if the requester is entitled to have the capacity request satisfied (see similar rejection to claim 7); responsive to determining that the requester is **not** entitled to have the capacity request satisfied, documenting the entitlement failure details; handling the service entitlement failure; and notifying the requester that the request will not be fulfilled (col. 22, line 52 – col. 23, line 5, "determine if the request can be met…respnds to the capacity analysis request, acknowledging…5) the requested services cannot be provided").

As to claim 29, Valdivia et al discloses the process of claim 28 wherein handling the service entitlement failure comprises the steps of: determining if the capacity request is covered by a contract (col. 22, lines 52-67, "2) the requested services can be provided but would require reconfiguration of system capacity resources" where the current configuration represents a contractl; col. 23, lines 1-5, "5) the requested services cannot be provided"); and responsive to determining that the capacity request is not covered by the contract, advising the requester that the capacity request will be cancelled (col. 23, lines 1-5, "5) the requested services cannot be provided")..

As to claim 30, Valdivia et al discloses the process of claim 28 wherein handling the service entitlement failure comprises the steps of: determining if the capacity request is covered

by a contract; responsive to determining that the capacity request is covered by a contract, determining if the requester is entitled to any available alternatives; responsive to determining that the requester is entitled to one or more available alternatives, reviewing the available alternatives with the requester to gain acceptance of at least one of the available alternatives; and responsive to gaining acceptance of at least one of the available alternatives, updating the capacity plan to reflect the result of the capacity request (figure 5; col. 22, line 53 – col. 23, line 20).

As to claim 31, Valdivia et al discloses the process of claim 28 wherein handling the service entitlement failure comprises the steps of: determining if the capacity request is covered by a contract; responsive to determining that the capacity request is covered by a contract, determining if the requester is entitled to any available alternatives (figure 5; col. 22, line 53 – col. 23, line 20); responsive to determining that the requester is **not** entitled to any available alternatives (figure 5; col. 22, line 53 – col. 23, line 20, "the requested services cannot be provided", i.e, even with reconfiguration of resources), obtaining approval for the original request; and updating the capacity plan to reflect the result of the capacity request (figure 23, lines 5-20, "negotiation"; col. 17, last paragraph, capacity plan and resource configurations are saved in database).

As to claim 32, Valdivia et al discloses the process of claim 1 embedded in computer program product (see similar rejection to claim 1).

As to claim 33, Valdivia discloses a system for managing capacity resources in a shared computing environment comprising: a service provider (figure 4, "NSP"); a plurality of service obligations (figure 4, "Wholesaler-NSP Agreements", "NSP-BBS Agreements"); a plurality of

capacity resources (col. 5, lines 1-3, "allow ST to send a specific number of packets on a

satellite's uplink to a specific Destination ST"; col. 4, lines 56-59, "rate allocation"); and a

capacity planner that produces and maintains a capacity plan (see similar rejection to claim 1),

wherein the capacity plan substantially identifies current and needed capacity resources and

substantially describes the allocation of the current and needed capacity resources (col. 9, lines

11-18, "actual usage and interference statistics are available for the operator to determine which

cells have excess capacity as well as the cells that are running short of capacity"), and executes

the capacity plan so that the service provider meets all service obligations (col. 23, lines 5-20,

"based on…contract agreement between the wholesaler and NSP…reconfigure capacity

resources").

As to claim 34, Valdivia et al disclose the system of claim 32 wherein the capacity

planner further handles capacity requests (figure 5, "Capacity Request").

As to claim 35, Valdivia et al discloses the system of claim 33 wherein the capacity

planner further reviews capacity requests to identify capacity issues that should be resolved in a

future capacity plan (figure 5; col. 23, lines 5-30).

As to claim 36, Valdivia et al discloses a system for managing capacity resources in a

shared computing environment comprising: a service provider; a plurality of service obligations;

a plurality of capacity resources; means for producing and maintaining a capacity plan; means

for handling capacity requests; and means for reviewing capacity requests to identify capacity

issues (see similar rejection to claims 33-35).

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

11.   Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valdivia, as

applied to claim 1, and further in view of Wickham *et al*. (U.S. Patent No. 6307546).

As to claim 3, Valdivia discloses the process of claim 2 wherein gathering capacity data

comprises the steps of:

determining capacity data requirements (figure 4, "Wholesaler-NSP Agreements; NSP-

BBS Agreements");

determining suppliers of the capacity data (figure 4, NOC has separate interfaces ("IF")

for Wholesaler, NSP, for example, therefore the supplier of the capacity data is determined by its

corresponding interface).

Valdivia does not expressly disclose determining if the capacity data is already available;

acquiring the capacity data from the database; validating the capacity data; determining if there is

a regular need for the data; and updating and documenting the database. Wickham discloses

determining if the requested data is already available (col. 10, lines 52-56, "determine

whether the requested objects have already been retrieved");

acquiring the requested data from the database (col. 10, lines 45-48, "the information is

now retrieved from a network database"; lines 58-59, "answers the "cached" objects");

validating the requested data (col. 10, lines 53-55, "checks its own state and determines

whether the requested objects have already been retrieved");

determining if there is a regular need for the data (See 112 rejection above and examiner's interpretation for "regular need"; col. 10, lines 58-62, the requested data is determined as needed data) and

updating and documenting the database (col. 10, lines 58-62, "installs them into the domain model and answers them").

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to combine the teachings disclosed by Valdivia, with the teachings disclosed by Wickham regarding determining if the requested data is already available; acquiring the requested data from the database; validating the requested data; determining if there is a regular need for the data; and updating and documenting the database. The suggestion/motivation of the combination would have been to improve efficiency (Wickham, col. 10, line 63, "lazy" retrieval).

As to claim 4, Valdivia-Wickham discloses the process of claim 2 further comprising the steps of:

responsive to determining that the capacity data is not already available, contacting the capacity data owner (Wickham, col. 10, lines 60-62);

requesting the capacity data; and justifying the request for the capacity data to the capacity data owner (Wickham, col. 10, lines 51-57).

12.   Claims 11, 14-15 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valdivia, as applied to claim 1, and further in view of Wichelman et al (U.S. Patent No. 6853932).

As to claim 11, Valdlvia et al does not expressly disclose determining if the deviation is the result of bad data capture; and responsive to determining that the deviation is the result of a

bad data capture, documenting the bad data capture details with a problem management program and documenting the deviation with a problem management program. Wichelman et al discloses determining if the deviation is the result of bad data capture; and responsive to determining that the deviation is the result of a bad data capture, documenting the bad data capture details with a problem management program and documenting the deviation with a problem management program (col. 21, last paragraph, rerun the testing by assuming the first occurrence of exception is due to bad data capture. All test results are saved as disclosed in figure 9F therefore both the exception and the deviation is documented).

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to combine the teachings disclosed by Valdlvia et al, with the teachings disclosed by Wichelman et al regarding determining if the deviation is the result of bad data capture; and responsive to determining that the deviation is the result of a bad data capture, documenting the bad data capture details with a problem management program and documenting the deviation with a problem management program. The suggestion/motivation of the combination would have been to prevent erroneous critical alarm due to single bad data (Wichelman et al, col. 21, last paragraph).

As to claim 14, Valdivia-Wichelman discloses the process of claim 13 wherein managing capacity data for reporting comprises the steps of: determining the data required for generating reports (col. 20, last paragraph, updated capacity plan is a type of report); determining if additional data elements are needed for generating reports (Valdivia, col. 20, last paragraph "a demodulator is move into the cell in the early morning"); responsive to determining that additional data elements are needed for generating reports, requesting the additional data

elements from a data collection team (Valdivia, col. 20, last paragraph, "sending commands to the payload", where payload is data collection team which in turn collects the additional traffic data, as shown in figure 4, "traffic measurements and statistics") , and responsive to receiving the additional data elements from the data collection team, validating the additional data elements (Valdivia, col. 18, line 16-19, "validating further ST provisioning parameters"); determining the report format (Wichelman, figure 10, "GUI", "Group level information", "Node level information" are formats); determining the frequency and date of reporting (Valdivia, col. 20, last paragraph, "daily"); determining the destination for the report; and notifying a report recipient when the report is available for retrieval from a database (Wichelman, figure 10, the desitnation is "GUI" user. Figure 11A indicates user is notified that report is available by viewing the report window).

As to claim 15, Valdivia-Wichelman discloses the process of claim 13 wherein running reports comprises the steps of: extracting report specifications from the database (Wichelman, figure 10 and 11A show test results wich was saved in database as disclosed by figure 9F, "Store results in database"); creating pre-defined reports with a reporting program (Wichelman, figure 10 and figure 11A); determining if the report format or report content requires correction; responsive to determining that the report requires correction, making the required changes to the report (Valdivia, col. 20, last paragraph); and distributing reports to one or more report recipients (figure 11A by presenting the report to the user).

As to claim 19, Valdivia-Wichelman discloses the process of claim 17 wherein investigating the deviations comprises the steps of: determining if the deviation is the result of a

business cycle; responsive to determining that the deviation is the result of a business cycle,

documenting the deviation (see similar rejection to claim 15).

As to claim 20, Valdivia-Wichelman discloses the process of claim 17 wherein

investigating the deviations comprises the steps of: determining if the deviation is the result of

bad data capture; and responsive to determining that the deviation is the result of a bad data

capture, documenting the bad data capture details with a problem management program and

documenting the deviation with a problem management program (see similar rejection to claim

11).

13.   Claims 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Valdivia, as

appliedc to claim 1, and further in view of ON (official notice).

As to claim 27, Valdivia et al discloses the process of claim 25 wherein determining and

applying a projection methodology comprises the steps of: reviewing available workload data

(col. 9, lines 1-3, "traffic patterns"); evaluating appropriateness and source of workload data (col.

9, lines 52-56); choosing the most appropriate projection methodology (col. 9, lines 36-42,

"based on...traffic demands, or interference" are the most appropriate projection methodology

chosen); applying the chosen projection methodology (col. 9, lines 36-42, "based on...traffic

demands, or interference"); producing forecast projections and assumptions (col. 9, lines 36-42,

"based on...traffic demands, or interference"; col. 20, lines 44-55, "trend analysis and expected

future demand for broadcast service"; assumption implied here is that the past data can be

analyzed to indicate expected future demand); and storing the forecast projections and

assumptions (col. 20, lines 44-55, "trend analysis and expected future demand for broadcast

service" implies stored before it can be used), but does not expressly disclose stored in the

database. An official notice is taken here that it is a known practice at the time of invention to

store data in a database and obvious for an ordinary skilled in the art to apply such practice to the

process disclosed by Valdivia, in order to standardize data storing and searching and improve

efficiency.

14.   Claims 12 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Valdivia, in view of Wichelman, as applied to claim 11, and further in view of Whitman, Jr. (US

patent 7499844)

As to claim 12, Valdivia-Wichelman discloses the process of claim 8 wherein

investigating the deviations comprises the steps of: determining if the deviation is the result of an

unknown reason; and responsive to determining that the deviation is the result of an unknown

reason, documenting the deviation with a problem management program (see similar rejection to

claim 11 where "bad data" is a general category and the exact cause is "unknown"), and

documenting the required capacity plan changes (Valdivia, col. 20, last paragraph) but does not

expressly disclose determining if the deviation is likely to re-occur. Whitman, Jr. disclose

determining if an event is likely to re-occur (claim 3).

At the time of invention, it would have been obvious to a person of ordinary skilled in the

art to combine the teachings disclosed by Valdivia-Wichelman, with the teachings disclosed by

Whitman, Jr regarding determining if an event is likely to re-occur. The suggestion/motivation

of the combination would have been to predict variations (Whitman, Jr., claim 3).

As to claim 21. The process of claim 17 wherein investigating the deviations comprises

the steps of: determining if the deviation is the result of an unknown reason; and responsive to

determining that the deviation is the result of an unknown reason, documenting the deviation

with a problem management program, determining if the deviation is likely to **re-occur**, and

responsive to determining that the deviation is likely to re-occur, documenting the required

capacity plan changes (see similar rejection to claim 12).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to HUA FAN whose telephone number is (571)270-5311. The

examiner can normally be reached on M-F 9am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. F./
Examiner, Art Unit 2456

/Bunjob Jaroenchonwanit/
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